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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/614,201      | 07/08/2003  | Tadashi Uematsu      | 116441              | 6364             |

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OLIFF & BERRIDGE, PLC  
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ALEXANDRIA, VA 22320

EXAMINER

CUEVAS, PEDRO J

ART UNIT PAPER NUMBER

2834

DATE MAILED: 12/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/614,201

Applicant(s)

UEMATSU ET AL

Examiner

Pedro J. Cuevas

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 7/8/03
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,477,766 to Akita et al.

Akita et al. clearly teaches the construction of an apparatus for controlling electric generation for vehicles comprising:

switch means (400) coupled to supply a drive current to display means (column 2, lines 43-47) which indicate a power generating status of said electrical generator, said switch means operable for interrupting said supply of drive current;

current detection means (S) for detecting a level current flow through the switch means;

reference value generating means for determining a reference value ( $V_{ref}$ ), to be compared with said level of current;

current limiting means (50) for comparing said level of current with said reference value, and for limiting a current supply operation of said switch means in accordance with a result of said comparison;

wherein said reference value generating means:

successively outputs a plurality of reference values, including a first reference value ( $V_{th1}$ ) corresponding to a current value which greater than maximum value surge current which flows in said switch means, and a second reference value ( $V_{th2}$ ) which corresponds to a current value that is greater than a normal value of current which flows said switch means,

establishes successively shorter respective durations outputting said reference values accordance with respective magnitudes of said reference values,

repetitively outputs a plurality of said reference values succession, fixed repetition period;

said apparatus produces three or more reference values (Abstract) including said first and second reference values, and outputs said first reference value when a maximum value of an initial flow of current through said switch means occurs, and outputs a plurality of said reference values other than said first reference value as values which become for an electrical generator successively smaller in a stepwise manner following outputting of said first reference value (Figure 2)

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S.

Patent No. 4,477,766 to Akita et al. in view of U.S. Patent No. 4,825,330 to Walchie.

Akita et al. disclose the construction of an apparatus for controlling electric generation for vehicles as disclosed above.

However, it fails to disclose a switch means comprising a MOS (Metal-oxide semiconductor) type of transistor.

Walchie teach the construction of an ultra-fast solid-state power interrupter comprising a MOS (Metal-oxide semiconductor) type of varistors (MOV1, MOV2) for the purpose of protecting Q1 from inductive surges, which occur when the Electronic Switch is opened at non-zero crossing point of the load current.

It would have been obvious to one skilled in the art at the time the invention was made to use the MOS type electronic devices disclosed by Walchie on the apparatus disclosed by Akita et al. for the purpose of protecting a transistor from inductive surges which occur when the a switch is opened at non-zero crossing point of a load current.

5. With regards to claim 5, it would have been obvious to one having ordinary skill in the art at the time the invention was made to set the predetermined period to 10 milliseconds, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

It would have also been obvious to one having ordinary skill in the art at the time the invention was made to set the predetermined period to be greater than 10 milliseconds, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

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*Conclusion*

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

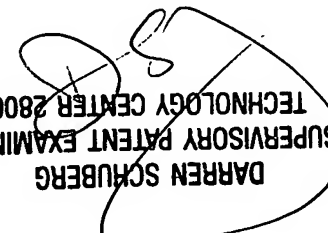
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pedro J. Cuevas whose telephone number is (571) 272-2021. The examiner can normally be reached on M-F from 8:30 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571) 272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Pedro J. Cuevas  
December 14, 2004



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SUPERVISORY PATENT EXAMINER  
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